

Date of Report and Type: 9/10/2018 Initial**BURNED-AREA REPORT**

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST**A. Type of Report**

- ☒ 1. Funding request for estimated emergency stabilization funds
- ☐ 2. Accomplishment Report
- ☐ 3. No Treatment Recommendation

B. Type of Action

- ☒ 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)
- ☐ 2. Interim Report #____
- ☐ Updating the initial funding request based on more accurate site data or design analysis
- ☐ Status of accomplishments to date
- ☐ 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION**A. Fire Name:** Rattlesnake Creek**B. Fire Number:** ID-NCF-00362**C. State:** Idaho**D. County:** Idaho and Adams**E. Region:** 1 and 4**F. Forest:** Nez Perce-Clearwater and Payette**G. District:** Salmon River (NCF) and New Meadows (PAF)**H. Fire Incident Job Code:** P1L1A118 0117**I. Date Fire Started:** 07/23/18**J. Date Fire Contained:** 90% as of 9/8/18**K. Suppression Cost:** \$26,000,000 as of 9/8/18**L. Fire Suppression Damages Repaired with Suppression Funds (estimates):**

1. **Dozer Fireline repaired** (miles): 16.1 miles
2. **Handline repaired** (miles): 14.3 miles

M. Watershed Numbers:*Table 1: Acres Burned by Watershed*

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170602100401	Upper Rapid River	26,750	27	0.1
170602100402	Copper Creek-Rapid River	15,123	287	1.9
170602100501	Boulder Creek	25,166	1,867	7.4

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170602100502	Elk Creek-Little Salmon River	28,437	3,896	13.7
170602100503	Sheep Creek-Little Salmon River	23,129	2,136	9.2

N. Total Acres Burned:*Table 2: Total Acres Burned by Ownership*

OWNERSHIP	ACRES
NFS	7,049
BLM	386
STATE	465
PRIVATE	313
TOTAL	8,213

O. Vegetation Types: Dry mixed conifer, bitterbrush, grasses, mixed shrubs.

P. Dominant Soils: Dominant families are Typic Dystrochrepts and Ultic Haploxerolls. Surface layers formed in volcanic ash-influenced loess mixed with subsoil material. Soils form on very steep dissected stream breaklands. Dominant vegetation community is open dry coniferous forests.

Q. Geologic Types: The burn scar is underlain by biotite gneiss, biotite schist, and Columbia River basalt. Idaho Batholith and alluvial, landslide, and glacial deposits are also present.

R. Miles of Stream Channels by Order or Class:*Table 3: Miles of Stream Channels by Order or Class*

STREAM TYPE	MILES OF STREAM
PERRENIAL	11.9
INTERMITTENT/EPHEMERAL	6.9

S. Transportation System:

Trails: National Forest (miles): 14.6 Other (miles): 0.0

Roads: National Forest (miles): 8.2 Other (miles): 0.6

PART III - WATERSHED CONDITION**A. Burn Severity (acres):***Table 4: Burn Severity Acres by Ownership*

Soil Burn Severity	NFS	BLM	State	Private	Total	% within the Fire Perimeter
Low	2,359	187	276	208	3,030	37
Moderate	1,424	24	88	15	1,551	19
High	89	0	0	0	89	1
Unburned	3177	176	101	89	3,543	43
Total	7,049	387	465	312	8,213	100

B. Water-Repellent Soil (acres): 465

C. Soil Erosion Hazard Rating: Moderate: 5,907; Severe: 533

D. Erosion Potential (tons/acre): 5.4 **Sediment Potential**(cubic yards/square mile): 2,094

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period (years): 3-5 years

B. Design Chance of Success (percent): 80%

C. Equivalent Design Recurrence Interval (years): 10 years

D. Design Storm Duration (hours): Two storms were modeled. The first was a 1 hour storm with peak 15-minute rainfall intensity (USGS debris flow model) and the second with a 1 hour duration (WEPP PEP).

E. Design Storm Magnitude (inches): 1" (USGS) and 0.57" (WEPP PEP)

F. Design Flow (cubic feet / second/ square mile): 23.1

G. Estimated Reduction in Infiltration (percent): 8% of Indian Creek and 6% of entire fire area will have reduction. (Assuming 30% of the moderate burn severity, 0% of Low and High

H. Adjusted Design Flow (cfs per square mile): 31.0 (no bulking factor applied to model outputs)

PART V - SUMMARY OF ANALYSIS**Introduction/Background**

The Rattlesnake Creek Fire was first detected on July 23, 2018 at 1202 hours. The fire started southwest of the community of Riggins, ID. It was determined to be human caused. Initial suppression actions were taken by local forces that afternoon and the following day. Northern Rockies IMT2 Team 3 assumed command of the fire on July 25. A transfer of command occurred to Southwest IMT2 Team 3 on August 9, when the fire was 3,851 acres and 32% contained. On August 14, the fire exhibited extreme fire behavior and made significant runs to the south towards Pollock Mountain, resulting in an increase in fire growth to 7,432 acres and a decrease in containment to 28%. On August 18, the Type 1 Southwest Area IMT Team 1 assumed command for 16 days. At the time of the initial BAER analysis a local Type 4 team was in command and the reported fire acreage was 8,213 acres with 90% containment. Throughout the incident, a full-suppression strategy was employed, using a variety of tactics.

The fire burned on land managed by the Nez Perce-Clearwater National Forests, the Payette National Forest, the Bureau of Land Management Cottonwood Field Office, the Idaho Department of Lands, and privately owned land.

The primary post-fire damages that are expected to occur are the loss of native plant communities due to invasion by noxious weeds within suppression damaged areas and burned areas that experienced moderate to high fire intensities, resulting in reduced canopy cover.

Threats to the NFS trail network within the burn scar are present due the increased watershed response to precipitation events. Damage to trail prisms is expected as a result of increased hydrophobicity and decreased ground and canopy cover within areas of moderate soil burn severity.

Average annual precipitation in the vicinity of the Rattlesnake Creek Fire is approximately 23 inches. Storm intensities that occur in the area can be 0.5 inches in an hour and 4 inches over 24 hours (WEPP PEP Climate data 25 year storm events). Long duration, rain on snow events are the precipitation events of primary concern. Based on historic precipitation patterns, these events are likely to occur during the warm, atmospheric river events which direct large volumes of moisture from the Pacific into narrow bands coupled with warm air masses from the South Pacific. Storms of long duration, can saturate snowpack in the higher elevations and initiate subsurface and overland flow resulting in slumping, slides, mass erosion, trail erosion, and crossing failures.

Wildfire can significantly alter the hydrologic response of a watershed to the extent that even modest rainstorms can produce dangerous flash floods and debris flows. The USGS conducts post-fire debris-flow hazard assessments for fires in the Western U.S. They use geospatial data related to basin morphometry, burn severity, soil properties, and rainfall characteristics to estimate the probability and volume of debris flows that may occur in response to a design storm. The USGS used SBS data to run the Post-Fire Debris Flow Hazard Model. The design storm selected to represent potential hazard for the Rattlesnake Creek fire was the 15 minute 24mm (1 inch) storm. Most Values at Risk are unlikely to be affected by debris flows. However, some areas of increased risk do occur in Indian Creek (28% increased risk) and two unnamed face drainages (80 and 41% increased risk) which flow directly into the Little Salmon River (T22N, R1E, SW ¼, Section 4, just upstream of Indian Creek). There are no roads, trails, trail bridges, or other forest service infrastructure that could be affected by debris torrents directly. Effects to soil, water, and fisheries are within the natural range of events known to occur within this setting.

Additional threats to human life and safety are present due to the presence of fire weakened/killed trees, rolling debris, and potential for localized debris flow events.

A. Describe Critical Values/Resources and Threats (narrative):

A list of values important to the Nez Perce-Clearwater and Payette National Forests was compiled by the BAER team during the assessment kickoff meeting. The BAER team subsequently evaluated this list of values through field assessment and associated analysis to determine the critical BAER values (FSM 2523.1 – Exhibit 01) that may be treated within the BAER program. The risk (FSM 2523.1 – Exhibit 02) to these critical values has been assessed by the BAER team and is described below. A list of treatment numbers has been included below each critical value description to ensure tracking between values and treatments.

Table 5: Critical Value Matrix

Probability of Damage or Loss	Magnitude of Consequences		
	Major	Moderate	Minor
	RISK		
Very Likely	Very High	Very High	Low
Likely	Very High	High	Low
Possible	High	Intermediate	Low
Unlikely	Intermediate	Low	Very Low

1. Human Life and Safety (HLS):

- a. Very high risk to all travelers along routes (open NFS roads and NFS trails) within and downslope from hillslopes burned at a moderate to high severity due to an increased threat of falling trees, rocks, and other debris. The probability of damage or loss is likely and the magnitude of consequences is major. (Treatments T06, T07)
- b. High risk to forest visitors and employees throughout the burned area due to an increased threat of falling trees, rocks, and other debris. The probability of damage or loss is possible and the magnitude of consequences is major. (Treatment T06, T07)
- c. Intermediate risk to Forest employees and Permittees along routes (closed administrative use roads) within and downslope from hillslopes burned at a moderate to high severity due to an increased threat of falling trees, rocks, and other debris. The probability of damage or loss is unlikely and the magnitude of consequences is major. BAER treatments are not recommended.
- d. Low risk to trail users within the burned area who may become disoriented due to fire damage to directional/mileage signs at trail intersections throughout the burned area. The

probability of damage or loss is possible and the magnitude of consequences is minor. BAER treatments are not recommended.

2. Property (P):

- a. High risk to trail infrastructure throughout the burn scar due to an increased post-fire watershed response to precipitation and runoff events that is expected to result in the loss of control of water, overwhelming of existing drainage features and erosion of the trail prism. The burned area contains approximately 3.0 miles of trails at risk. The probability of damage or loss is likely and the magnitude of consequences is moderate. (Treatment T05)

3. Natural Resources (NR):

- a. Very high risk to native plant communities due to the threat from the spread of noxious weeds and invasive plant species. Known noxious weed and invasive plant populations exist within and immediately adjacent to the burned area. The ICP that was used for the majority of the fire is heavily infested with noxious weeds. Firefighting vehicles and equipment traveled from the ICP to the burned area daily for approximately 6 weeks without being washed. The probability of damage or loss is likely and the magnitude of consequences is major. (Treatments T01, T02, T03, T04)
- b. Intermediate risk to soil productivity and hydrologic function due to the threat of increased erosion and watershed response to precipitation events on areas that experienced moderate and high soil burn severity. The loss of canopy cover, loss of ground cover, and presence of hydrophobic soils may result in increased soil erosion, loss of top soil, reduced site productivity, debris flow initiation, channel scouring, and sedimentation during runoff producing events. The probability of damage or loss is possible and the magnitude of consequences is moderate. BAER treatments are not recommended.
- c. Low risk to critical habitat for Steelhead and occupied habitat for Bull Trout in Lockwood and Pony Creeks due to the threat of increased channel sedimentation, debris flows, loss of LWD and channel habitat complexity. The probability of damage or loss is possible and the magnitude of consequences is minor. BAER treatments are not recommended.
- d. Low risk to waters that are used for domestic and agricultural supply due to the threat of increased runoff, flooding, debris flows, and decreased water quality. The probability of damage or loss is possible and the magnitude of consequences is minor. BAER treatments are not recommended.

4. Cultural and Heritage Resources:

- a. Intermediate risk to two NHRP eligible sites due to the threat of erosion of the sites and looting of artifacts that could result in irreversible damage and loss of scientific information. The probability of damage or loss is unlikely and the magnitude of consequences is major. BAER treatments are not recommended.

5. Other non-BAER Values:

Although not necessarily BAER Critical Values, there are several NFS and non-NFS values that are potentially at risk from post-fire threats originating primarily on NFS lands. Therefore, ongoing coordination with partner agencies and potentially affected entities is highly recommended. Other non-BAER values include:

- Human life and safety on BLM, State, and private lands within and downslope of the burn scar. Threats to visitors and occupants include falling trees, rocks, and debris flow events.

- Privately owned road systems below the burn scar in the Little Salmon River corridor. Threats include loss of control of water and culvert plugging during runoff producing events.
- Privately owned residences and outbuildings below the burn scar in the Little Salmon River corridor. Culvert plugging could reroute flow and impact downstream/downslope structures. Falling trees and debris rolling off of burned hillslopes could impact downslope structures.
- Privately owned water systems within and below burned watersheds could become damaged and/or plugged with debris during runoff producing events.
- Fire damage to NFS range improvements may result in the inability to administer grazing permits in the Fall Creek Whitebird C&H allotment.

B. Emergency Treatment Objectives:

Mitigate and protect, to the extent possible, threats to personal injury or human life of forest visitors and Forest Service employees by raising awareness through posting hazard warning signs on roads and trails and communicate hazard of flooding, debris flows, and rock fall. Provide safe access to the burned area for personnel implementing authorized BAER response actions and communicate threats to cooperating agencies.

Protect or minimize damage to NFS investments in trail infrastructure by installing drainage features capable of withstanding potential increased stream flows and/or debris flows.

Protect or mitigate potential post-fire impacts to critical natural resources within the burned area. Implement treatments that minimize threats to native and naturalized ecosystems by minimizing the potential for expansion of non-native invasive species (NNIS) into the burned area; minimize expected invasion of NNIS within and adjacent to the area where soils and vegetation was disturbed as a result of fire suppression activities.

Evaluate authorized BAER treatments and existing infrastructure to determine effectiveness in post-fire flow conditions. Monitor weeds for effectiveness of BAER treatments and to identify need for future treatments.

Assist cooperators, other local, State, and Federal agencies with the interpretation of the assessment findings to identify and address potential post-fire impacts to communities and residences, domestic water supplies, and road systems.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land 80%

Roads/Trails 80%

Channel N/A

Protection/Safety 90%

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	3 years after treatment	5 years after treatment
Land	70	80	90
Channel	N/A	N/A	N/A
Roads/Trails	80	85	90
Protection/Safety	90	80	70

E. Cost of No-Action (Including Loss): \$292,000

- a. Trails: 3 Miles of NFS trail valued at \$17,500/mile. 80% Chance of loss w/o BAER treatments. = \$42,000
- b. Native and Naturalized Plant Communities: Weeds Treatment Cost without BAER Treatment in year 1= \$250,000

F. Cost of Selected Alternative (Including Loss): \$59,172

- a. Trails: 3 Miles of treatment valued at \$14,460. 20% Chance of loss w/ BAER treatments = \$17,352
- b. Native and Naturalized Plant Communities: Year 1 BAER Treatment cost of \$40,135. Years 2-3 non-BAER treatment costs of \$45,000
- c. Protection of Human Life and Safety (Warning Signs) = \$1,685

G: Skills Represented on Burned-Area Survey Team:

- | | | | | |
|---|---|---|---|---|
| <input checked="" type="checkbox"/> Archaeology | <input type="checkbox"/> Botany | <input type="checkbox"/> Ecology | <input type="checkbox"/> Economist | <input checked="" type="checkbox"/> Engineering |
| <input checked="" type="checkbox"/> Fisheries | <input type="checkbox"/> Forestry | <input checked="" type="checkbox"/> GIS | <input checked="" type="checkbox"/> Hydrology | <input checked="" type="checkbox"/> Range |
| <input checked="" type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Soils | <input checked="" type="checkbox"/> Team Lead | <input type="checkbox"/> Wildlife | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Team Leader: Brendan Waterman**Email:** bwaterman@fs.fed.us **Phone:** 385-377-4338**Forest BAER Coordinator:** NCF – Michele Windsor; PAF – Steve Kimball**Email:** micheleawindsor@fs.fed.us; skimball@fs.fed.us **Phone:** 208-935-4282; 208-634-0707**Core Team Members:**

Table 7: BAER Team Members by Skill

Skill	Team Member Name
Team Lead(s)	Brendan Waterman
Engineering	Chris Wolffing, Paul McCloskey
Fisheries	Jason Greenway
GIS	Steve Penny
Hydrology	Leigh Bailey, Megan Hederman, Daniel Hertel
Range/Weeds	Brain McMorris
Recreation	Lisa Portune
Soils	Alex Rozin

H. Treatment Narrative:

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

Land Treatments:**T01 – Nez Perce-Clearwater Early Detection and Rapid Response – Suppression Impacts**

General Description: To protect native, and naturalized plant communities from noxious weeds on National Forest System (NFS) lands where fire suppression disturbance efforts took place during fire activities. If noxious weed infestations are detected treat as necessary (EDRR). Any known noxious weed sites that have potential to spread due to fire suppression activities will be monitored and treated along with the EDRR. There is one listed sensitive mustard plant, and critical habitat of ESA listed fish downstream from the NFS lands that will benefit from EDRR related to the control of noxious weeds. By allowing EDRR on fire suppression activities, it will increase the effectiveness of EDRR on the original BAER efforts.

Known weeds that have been found in and around the fire suppression on NFS lands include: Canada thistle, dalmatian toadflax, diffuse knapweed, field Bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax. Plants of concern are the spread of highly invasive annual grasses medusahead, ventenata, cheatgrass, and myrtle/toothed spurge.

Location/Suitable Sites: EDRR would take place where suppression activities caused damage or disturbances (e.g. construction of fire lines) on National Forest System Lands. All hand line, dozer line, helispots, drop points, medevac sites, spike camps, and any other area where suppression activities directly created an opening/disturbance that facilitates the introduction or expansion of noxious weeds into areas where they were not present prior to the disturbance or where they were documented to be in close proximity to the disturbed area, or where unmitigated suppression activities significantly increased the risk of introducing new noxious weeds. These areas are not contiguous.

Design/Construction Specifications: EDRR - Monitor the above mentioned areas in the fall/early winter to track any new noxious weed infestations, or known weed infestations that have increased due to fire suppression activities. Monitoring would then be conducted spring/summer/early fall to track any new noxious weed populations or known populations are expanding because of fire suppression. These would be conducted by a small ground crew (motorized, hiking, horseback).

Two separate surveys, A) late fall/early winter and B) spring/summer/early fall to detect multiple noxious weed species that are highly likely to emerge due to the fire suppression disturbance. If the accelerated spread of noxious weeds is verified, then plan and design treatment (that is already NEPA approved). Select integrated weed management treatment dependent upon weed species and location. With chemical treatments, determine appropriate herbicide, application rate, and application timing based on species being treated and access to the population. Consider sensitive habitat needs when selecting appropriate herbicide.

Purpose of Treatment: Reduce the potential for establishment of new noxious weed infestations in areas disturbed by fire suppression activities, prevent spread of existing infestations, and prevent increase in density in existing infestations. Reduce the potential for establishment of new noxious weed infestations in native or naturalized communities.

Table 8: NCF EDRR Suppression Impacts Treatment Types and Cost

TREATMENT DESCRIPTION	TARGET WEED SPECIES	PRESCRIPTION	ESTIMATED ACRES	COST PER ACRE	COST	TIMING
EDRR - SUPPRESSION IMPACTS	Canada thistle, dalmatian toadflax, diffuse knapweed, field bindweed, houndstongue,	Monitor areas disturbed by suppression activities and treat new infestations when detected.	124	\$45.45	\$5,636	Fall 2018, Spring 2019

TREATMENT DESCRIPTION	TARGET WEED SPECIES	PRESCRIPTION	ESTIMATED ACRES	COST PER ACRE	COST	TIMING
	Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, Scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax					

T02 – Nez Perce-Clearwater Early Detection and Rapid Response – High Priority Native and Naturalized Communities

General Description: To protect native or naturalized plant communities where noxious weeds are currently absent or present in very minor amounts. We would be using EDRR for any new noxious weeds within the fire area. We would also monitor/treat small known populations if likely to spread because of high/very high risk and cause major/moderate consequences. There is one listed sensitive plant, and critical habitat for ESA listed fish species downstream from National Forest System Lands (NFS lands) that would benefit from protect against noxious weed infestations.

Known weeds that have been found in and around the fire area on NFS lands or adjacent other lands are: Canada thistle, dalmatian toadflax, diffuse knapweed, field bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, Scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax. Plants of concern are the annual grasses medusahead, ventenata, cheatgrass and the forbs myrtle/toothed spurge.

Location/Suitable Sites: Areas where the canopy has opened up because of fire and where little to no understory is present to compete with new weed infestations. Areas around the sensitive listed mustard, high/moderate fire severity, places expected to have low vegetative recovery, and areas around small known noxious weed populations that are likely sources of expansion risk. (See map below). These areas are not contiguous, but may be shown on the map that way. This is because of mosaic burn.

Design/Construction Specifications: EDRR - Monitor areas in the fall/early winter to track the status of the recovering vegetation and if any new noxious weeds have started germinating. Detect any new noxious weeds that may have been able to out-compete native vegetation, and are now able to be detected in the freshly opened up canopy/bare soil. Monitoring would be conducted in the spring/summer/early fall to see if there are any new noxious weed populations or the small populations that are increasing because of the fire effects. These would be conducted by small a ground crew (motorized, hiking, horseback).

Two separate surveys, A) late fall/early winter and B) spring/summer/early fall to detect noxious weed species that are highly likely to emerge in the various ecosystems involved in the fire area. If the accelerated spread of noxious weeds is verified, then plan and design treatment (that is already NEPA approved). Select integrated weed management treatment dependent upon weed species and location. With chemical treatments, determine appropriate herbicide, application rate, and application timing based on species being treated and access to the population. Consider sensitive habitat needs when selecting appropriate herbicide.

Purpose of Treatment: Reduce the potential for establishment of new noxious weed infestations in highly susceptible burned areas, prevent spread of existing infestations adjacent to burn areas from coming in, and prevent increase in small weed density existing infestations in burn areas. Reduce the potential for establishment of new noxious weed infestations in native or naturalized communities.

Table 9: NCF EDRR High Priority Native/Naturalized Communities Treatment Types and Cost

TREATMENT DESCRIPTION	TARGET WEED SPECIES	PRESCRIPTION	ESTIMATED ACRES	COST PER ACRE	COST	TIMING
EDRR – HIGH PRIORITY NATIVE/ NATURALIZED COMMUNITIES	Canada thistle, dalmatian toadflax, diffuse knapweed, field bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, Scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax	Monitor native and naturalized plant communities within the burned area that were free of noxious weeds and invasive species. Treat new detections immediately to stop spread into previously weed-free areas.	550	21.80	\$11,990	Fall 2018, Spring 2019

T03 – Payette Early Detection and Rapid Response – Suppression Impacts

General Description: To protect native, and naturalized plant communities from noxious weeds on National Forest System (NFS) lands where fire suppression disturbance efforts took place during fire activities. If noxious weed infestations are detected treat as necessary (EDRR). Any known noxious weed sites that have potential to spread due to fire suppression activities will be monitored and treated along with the EDRR. There is one listed sensitive mustard plant, and critical habitat of ESA listed fish downstream from the NFS lands that will benefit from EDRR related to the control of noxious weed. By allowing EDRR on fire suppression activities, it will increase the effectiveness of EDRR on the original BAER efforts.

Known weeds that have been found in and around the fire suppression on NFS lands include: Canada thistle, dalmatian toadflax, diffuse knapweed, field Bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax. Plants of concern are the spread of highly invasive annual grasses medusahead, ventenata, cheatgrass, and myrtle/toothed spurge.

Location/Suitable Sites: EDRR would take place where suppression activities caused damage or disturbances (e.g. construction of fire lines) on National Forest System Lands. All hand line, dozer line, helispots, drop points, medevac sites, spike camps, and any other area where suppression activities directly created an opening/disturbance that facilitates the introduction or expansion of noxious weeds into areas where they were not present prior to the disturbance or where they were documented to be in close proximity to the disturbed area, or where unmitigated suppression activities significantly increased the risk of introducing new noxious weeds. These areas are not contiguous.

Design/Construction Specifications: EDRR - Monitor the above mentioned areas in the fall/early winter to track any new noxious weed infestations, or known weed infestations that have increased due to fire suppression activities. Monitoring would then be conducted spring/summer/early fall to track any new noxious weed populations or known populations are expanding because of fire suppression. These would be conducted by a small ground crew (motorized, hiking, horseback).

Two separate surveys, A) late fall/early winter and B) spring/summer/early fall to detect multiple noxious weed species that are highly likely to emerge due to the fire suppression disturbance. If the accelerated spread of noxious weeds is verified, then plan and design treatment (that is already NEPA approved). Select integrated weed management treatment dependent upon weed species and location. With chemical treatments, determine appropriate herbicide, application rate, and application timing based on species being treated and access to the population. Consider sensitive habitat needs when selecting appropriate herbicide.

Purpose of Treatment: Reduce the potential for establishment of new noxious weed infestations in areas disturbed by fire suppression activities, prevent spread of existing infestations, and prevent increase in density in existing infestations. Reduce the potential for establishment of new noxious weed infestations in native or naturalized communities.

Table 10: PAF EDRR Suppression Impacts Treatment Types and Cost

TREATMENT DESCRIPTION	TARGET WEED SPECIES	PRESCRIPTION	ESTIMATED ACRES	COST PER ACRE	COST	TIMING
EDRR - SUPPRESSION IMPACTS	Canada thistle, dalmatian toadflax, diffuse knapweed, field bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush	Monitor areas disturbed by suppression activities and treat new infestations when detected.	323	34.34	\$11,095	Fall 2018, Spring 2019

TREATMENT DESCRIPTION	TARGET WEED SPECIES	PRESCRIPTION	ESTIMATED ACRES	COST PER ACRE	COST	TIMING
	skeletonweed, Scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax					

T04 – Payette Early Detection and Rapid Response – High Priority Native and Naturalized Communities

General Description: To protect native or naturalized plant communities where noxious weeds are currently absent or present in very minor amounts. We would be using EDRR for any new noxious weeds within the fire area. We would also monitor/treat small known populations if likely to spread because of high/very high risk and cause major/moderate consequences. There is one listed sensitive plant, and critical habitat for ESA listed fish species downstream from National Forest System Lands (NFS lands) that would benefit from protection against noxious weed infestations.

Known weeds that have been found in and around the fire area on NFS lands or adjacent other lands are: Canada thistle, dalmatian toadflax, diffuse knapweed, field bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, Scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax. Plants of concern are the annual grasses medusahead, ventenata, cheatgrass and the forbs myrtle/toothed spurge.

Location/Suitable Sites: Areas where the canopy has opened up because of fire and where little to no understory is present to compete with new weed infestations. Areas around the sensitive listed mustard, high/moderate fire severity, places expected to have low vegetative recovery, and areas around small known noxious weed populations that are likely sources of expansion risk. (See map below). These areas are not contiguous, but may be shown on the map that way. This is because of mosaic burn.

Design/Construction Specifications: EDRR - Monitor areas in the fall/early winter to track the status of the recovering vegetation and if any new noxious weeds have started germinating. To detect any new noxious weeds that may have been able to out-compete native vegetation, and are now able to be detected in the freshly opened up canopy/bare soil. Then monitoring would be conducted in the spring/summer/early fall to see if there are any new noxious weed populations or the small populations that are increasing because of the fire effects. These would be conducted by small ground crew (motorized, hiking, horseback).

Two separate surveys, A) late fall/early winter and B) spring/summer/early fall to detect noxious weed species that are highly likely to emerge in the various ecosystems involved in the fire area. If the accelerated spread of noxious weeds is verified, then plan and design treatment (that is already NEPA approved). Select integrated weed management treatment dependent upon weed species and location. With chemical treatments, determine appropriate herbicide, application rate, and application timing based on species being treated and access to the population. Consider sensitive habitat needs when selecting appropriate herbicide.

Purpose of Treatment: Reduce the potential for establishment of new noxious weed infestations in highly susceptible burned areas, prevent spread of existing infestations adjacent to burn areas from coming in, and prevent increase in small weed density existing infestations in burn areas. Reduce the potential for establishment of new noxious weed infestations in native or naturalized communities.

Table 11: NCF EDRR High Priority Native and Naturalized Communities Treatment Types and Cost

TREATMENT DESCRIPTION	TARGET WEED SPECIES	PRESCRIPTION	ESTIMATED ACRES	COST PER ACRE	COST	TIMING
EDRR – HIGH PRIORITY NATIVE AND NATURALIZED COMMUNITIES	Canada thistle, dalmatian toadflax, diffuse knapweed, field bindweed, houndstongue, Japanese knotweed, jointed goatgrass, poison hemlock, meadow knapweed, Mediterranean sage, oxeye daisy, puncturevine, rush skeletonweed, Scotch thistle, spotted knapweed, yellow starthistle, and yellow toadflax	Monitor native and naturalized plant communities within the burned area that were free of noxious weeds and invasive species. Treat new detections immediately to stop spread into previously weed-free areas.	618	18.47	\$11,414	Fall 2018, Spring 2019

Channel Treatments: None Proposed

Roads and Trail Treatments:

T05 – Payette Trail Drainage and Tread Protection

General Description: Clean, repair, and install waterbars, checks dams, and grade dips to prevent erosion. Hydrophobic soils and loss of ground cover in the fire perimeter will cause increased run off. Build land retention structures to mitigate the sloughing/slumping of cut and fill slopes. Remove all hazardous fire weakened trees that pose a threat to BAER implementation crews. These measures would also address the risk to human safety as well as the risk of loss of trail infrastructure.

Location/Suitable Sites: There are 3 miles of trail that fall within moderate severity on the SBS map. These trails are #178 Rapid River Ridge, #185 Trail Creek, #350 Campbell's Cow Camp Bypass, #181 Cow Camp, #327 Fall Creek.

Design/Construction Specifications: Construct/clean waterbars, check dams, and grade dips to aide in the removal of excess water from the trail prism. Build land retention/retaining structures out of native materials to meet Forest Service specifications. Remove all hazardous fire weakened trees that pose a threat to BAER implementation crews working in the area.

Purpose of Treatment: Waterbars and grade dips will divert water off of the trail preventing erosion and debris flows from degrading the trail. Check dams will slow the flow of water to reduce rilling. Completion of the treatment would remove the risk of catastrophic loss of trail prism and allow use to

continue. Preventing the loss of trail prism is much more cost effective then needing to rebuild trial prisms.

Table 11: PAF Trail Drainage and Treat Protection Treatment Cost Estimate

TREATMENT	UNIT	UNIT COST	# OF UNIT	TOTAL COST
GS-11 REC STAFF	Day	\$400	1	\$400
GS-7 REC TECH	Day	\$275	10	\$2,750
MCC CREW	Day	\$1,000	10	\$10,000
PACKER FOR SUPPLIES	Lump	\$1,000	1	\$1,000
FIELD PER DIEM FOR GS-7	Day	\$31	10	\$310

Protection/Safety Treatments:

T06 – Nez Perce-Clearwater Road Warning Sign

General Description: This treatment is for the installation of a burned area warning sign. Burned area signs warn the public identifying of the possible dangers associated with a burned area on major entry points into the burned area and developed recreation sites. It shall contain language specifying items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, and flash floods.

Location/Suitable Sites: On NFSR 624 (Whitebird Ridge Rd) at the burn scar boundary (refer to BAER Treatment Map).

Design/Construction Specifications: Burned Area warning signs along the roads shall consist of 0.08" aluminum, sheeted in high intensity orange with black letters. The WARNING lettering shall be a minimum of 5 inches in height and all remaining lettering shall be a minimum of 3.5 inches in height.

Purpose of Treatment: The purpose of the Burned Area sign is to improve the safety of motorists and recreational users by warning them of upcoming road dangers and changing conditions.

Table 12: NCF Road Warning Sign Cost Estimate

TREATMENT	UNIT	UNIT COST	# OF UNIT	TOTAL COST
GS-5 TECH	Day	\$140	1	\$140
SIGN, POSTS, HARDWARE	Lump	\$300	1	\$300
VEHICLE	Lump	\$52	1	\$52

T07 – Payette Trail Warning Signs

General Description: Install appropriate hazard signs at trail access points into the burned area. Burned area signs warn the public of possible dangers associated with a burned area such as falling trees and limbs, rolling rocks, and flash floods.

Location/Suitable Sites: On trail #178 where it enters the burn on the north end. On trail #178 where it enters the burn on the south end. At the junction of #181 and #327 at the burn scar boundary. On trail #185 where it enters the burn. At the junction of trail #178 and #329

Design/Construction Specifications: Burned Area warning signs at trail access points shall consist of 0.08" aluminum, Orange with black letters. The WARNING lettering shall be a minimum of 2 inches in height and all remaining lettering shall be a minimum of 1.5 inches in height.

Purpose of Treatment: Provide public information on post-fire hazards.

Table 13: PAF Trail Warning Signs Cost Estimate

TREATMENT	UNIT	UNIT COST	# OF UNIT	TOTAL COST
GS-5 REC TECH SIGNS, POSTS, HARDWARE VEHICLE	Day	\$140	4	\$560
	Each	\$115	5	\$575
	Lump	\$58	1	\$58

I. Monitoring Narrative:

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

T01 NCF EDRR Suppression: Follow-up monitoring would be needed in subsequent years if new or expanded weed populations are discovered during the FY 2019 BAER treatments.

T02 NCF EDRR High Priority Native and Naturalized Communities: Follow-up monitoring would be needed in subsequent years if new or expanded weed populations are discovered during the FY 2019 BAER treatments.

T03 PAF EDRR Suppression: Follow-up monitoring would be needed in subsequent years if new or expanded weed populations are discovered during the FY 2019 BAER treatments.

T04 PAF EDRR High Priority Native and Naturalized Communities: Follow-up monitoring would be needed in subsequent years if new or expanded weed populations are discovered during the FY 2019 BAER treatments.

T05 PAF Trail Drainage and Tread Protection: Regularly inspect waterbars, grade dips, land retention structures, and tread condition for the next 3 years or until side slopes revegetate.

T06 NCF Road Warning Sign: Forest personnel will monitor and check sign after events to ensure efficacy.

T07 PAF Trail Warning Sign: Forest personnel will monitor and check sign after events to ensure efficacy.

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS**Nez Perce-Clearwater NF**

			NFS Lands			Other Lands			All	
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER \$	\$	units	\$	Units	\$	\$
A. Land Treatments										
T01 - EDRR Suppression	Acre	45	124	\$5,636	\$0		\$0		\$0	\$5,636
T02 - EDRR High Priority Na	Acre	22	550	\$11,990	\$0		\$0		\$0	\$11,990
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Land Treatments				\$17,626	\$0		\$0		\$0	\$17,626
B. Channel Treatments										
None Proposed				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Channel Treatments				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
None Proposed				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Road and Trails				\$0	\$0		\$0		\$0	\$0
D. Protection/Safety										
T06 - Road Warning Sign	Each	492	1	\$492	\$0		\$0		\$0	\$492
				\$0	\$0		\$0		\$0	\$0
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Protection/Safety				\$492	\$0		\$0		\$0	\$492
E. BAER Evaluation										
Initial Assessment	Report	\$12,500		---	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
Insert new items above this line!				---	\$0		\$0		\$0	\$0
Subtotal Evaluation				\$0	\$0		\$0		\$0	\$0
F. Monitoring										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Monitoring				\$0	\$0		\$0		\$0	\$0
G. Totals				\$18,118	\$0		\$0		\$0	\$18,118
Previously approved										
Total for this request				\$18,118						

PART VII - APPROVALS

1. _____ /2018
Forest Supervisor Date

2. _____ /2018
Leanne Marten, Region 1 Regional Forester Date

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS**Payette NF**

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands			All Total \$
			# of Units	BAER \$		# of units	Fed \$	# of Units Non Fed \$	
A. Land Treatments									
T03 - EDRR Suppression	Acre	34	323	\$11,095	\$0		\$0	\$0	\$11,095
T04 - EDRR High Priority Cg	Acre	18	618	\$11,414	\$0		\$0	\$0	\$11,414
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Land Treatments</i>				\$22,510	\$0		\$0	\$0	\$22,510
B. Channel Treatments									
None				\$0	\$0		\$0	\$0	\$0
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Channel Treatments</i>				\$0	\$0		\$0	\$0	\$0
C. Road and Trails									
T05 - Trail Drainage and Tre	Mile	4,820	3	\$14,460	\$0		\$0	\$0	\$14,460
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Road and Trails</i>				\$14,460	\$0		\$0	\$0	\$14,460
D. Protection/Safety									
T07 - Trail Warning Signs	Each	239	5	\$1,193	\$0		\$0	\$0	\$1,193
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Protection/Safety</i>				\$1,193	\$0		\$0	\$0	\$1,193
E. BAER Evaluation									
Initial Assessment	Report	\$12,500		---	\$0		\$0	\$0	\$0
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				---	\$0		\$0	\$0	\$0
<i>Subtotal Evaluation</i>				\$0	\$0		\$0	\$0	\$0
F. Monitoring									
				\$0	\$0		\$0	\$0	\$0
				\$0	\$0		\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0	\$0	\$0
<i>Subtotal Monitoring</i>				\$0	\$0		\$0	\$0	\$0
G. Totals				\$38,163	\$0		\$0	\$0	\$38,163
Previously approved									
Total for this request				\$38,163					

PART VII - APPROVALS

1. _____ /2018
Forest Supervisor Date

2. _____ /2018
Nora Rasure, Region 4 Regional Forester Date











